

ATTACHMENT - REMARKS

By this Amendment, minor corrections have been made in the specification. In the claims, independent claim 1 has been amended for clarity, to better define the invention, and to include some of the subject matter of dependent claim 3 now canceled. Other dependent claims have also been amended consistent with the changes to independent claim 1 and/or for clarity; and a new claim 8 has been added. It is submitted that the present application is in condition for allowance for the following reasons.

Initially in the *Specification* section of the DETAILED ACTION, the disclosure was objected to in view of the noted clause. By this Amendment, the term "shirt" in the clause has been corrected to "skirt or ends". The term "skirt" was evidently originally intended, and to make sure that this is even more clear, the term "ends" has also been referred to. Some minor grammatical corrections of a self-evident nature have also been made to the paragraph. In addition, another paragraph has been amended in a self-evident manner to correct a grammatical inconsistency and otherwise for clarity. In view of the noted changes, it is submitted that the objection to the specification has been overcome.

In the following *Claim Objections* section of the Action, claims 1 and 5 were objected to for various informalities. By this Amendment, these informalities and other such potential informalities have been corrected in the claims. It is therefore submitted that the objections to claims 1 and 5 have all been overcome.

In the *Claim Rejections - 35 USC § 112* section, dependent claims 2 and 7 were rejected as being indefinite. In particular, the examiner noted that these claims included

the phrase "for instance". By this Amendment, the noted phrase has been deleted (together with other clarifying corrections of a self-evident nature in all of the claims).

In the *Claim Rejections - 35 USC § 103* section, independent claim 1 and dependent claims 4-7 were all rejected under 35 USC § 103 as being obvious over the principal Cornils patent in view of the Hiroshi JP patent; while dependent claim 2 was rejected over this same combination of references and further in view of the Honig publication; and while dependent claim 3 was rejected over this same combination of references and further in view of the Marttila patent. However, for the following reasons, it is submitted that the pending claims are all allowable over any combination of references.

Initially, it is noted that the method has been recited in the preamble of claim 1 as applying to an "anode or cathode conductive" sheet to better define the environment of use and the invention. Basis for this change is found in the first paragraph of the specification. It is also noted that independent claim 1 has been amended to recite the steps thereof in active verb form as desired for US practice.

It is further noted that independent claim 1 has been amended to recite that the edge of the conductive sheet is provided with holes to improve adhesiveness of the plastic strip to the conductive sheet. This limitation was previously recited in claim 3, now canceled.

In association with the hole limitation, claim 1 has further been amended to recite the step of cooling the strip and sheet edge so that the plastic material of outer strip surfaces of the strip cool and harden before plastic material of a spot 15 of the strip immediately adjacent the sheet edge. As noted in the specification in the first full

paragraphs on pages 2 and/or 4, this causes the mass of spot 15 of the strip to cool last, whereby in cooling this mass 15 shrinks resulting in a compressive fit onto the edge of the conductive sheet. This shrinkage/compression is also achieved with the mass inside of the claimed holes, further securing the strip to the conductive sheet. In order to achieve this shrinkage/compression, the edge of the sheet is pre-heated as part of the fitting of the sheet into the die space, and the die space with the sheet edge therein also heated as part of the feeding step (see e.g., figure 2 and the Abstract).

As result of the addition of subject matter from claim 3 to claim 1, and the addition of the cooling step limitation, it will also be appreciated that the relevant rejection is thus the combination of the Cornils patent, the Hiroshi JP patent and the Marttila patent and probably the Honig publication. For that reason, all of these references will be discussed hereafter.

The Cornils patent discloses a device for securing a polymer frame to a pane of glass. While the examiner has indicated that this glass is a sheet, it will be noted that it is not an "anode or cathode" as presently recited in claim 1. In addition, this patent does teach the heating of the glass as a whole (at 5:62-63, and not at 6:55-56). As the examiner has noted, this patent does not teach heating of the die space.

The Hiroshi JP patent discloses the heating of an outlet/die of an extruder. The use of a heater on the extruder prevents the resin in the outlet/die from cooling, which cooling would otherwise result in the need for a disadvantageous higher extruding pressure of the resin. While the examiner has asserted that it would be obvious to use such a heater in the extruder of the Cornils patent, it is applicant's contention that that assertion is incorrect for the following reasons.

Initially, it will be appreciated that the die tip 7 being heated in the Hiroshi JP patent has a very small uniform mass, a relatively large area for lose of heat (the exterior of the elongate cylinder thereof), and a relatively small flow of resin through this small tip. Therefore, there could be a noticeable lose of heat in this die tip without the disclosed heater. However, there is no disclosure in the Cornils patent that extruder head 25 of the Cornils patent suffers from this problem, as the extruder is fairly massive, and in particular does not have a small die tip which is exposed to atmosphere or otherwise subject to noticeable or disadvantageous heat loss.

In addition, the Cornils patent requires a predetermined resin viscosity in order to effect the described extrusion of frame 20. Lowering of that resin viscosity by heating the extruder and hence the resin therein as suggested by the examiner would change the resin viscosity and hence the extrusion parameters (especially the back pressure) required for proper forming of the frame 20, with no evident advantage since there is no disclosure of a problem with loss of heat from the extruder in the Cornils patent or a change in resin viscosity. And in that regard, it will be noted that the purpose of the heating of the die space in the present invention is to maintain the resin and sheet edge at a temperature so that cooling of the strip takes place preferentially on the outer strip surfaces first, and not for the purpose of maintaining resin viscosity or lowering of the extrusion pressure as in the Hiroshi JP patent.

Further, the Hiroshi JP patent only teaches that the heat is applied to the resin material before it is applied to the object. There is thus a fundamental difference between the die tip of the Hiroshi JP patent and the die head 25 of the Cornils patent which includes therein the object to which the resin is applied. The Hiroshi JP patent

thus teaches nothing about heating the resin as it is being applied to a object and thereafter, which object is also subject to being heated by the heater in the extruder as claimed.

Finally, it will be noted that two resin supply channels are provided in the Cornils patent (see figure 3), and that there is an asymmetrical configuration of the extruded frame. Both of these factors would also seemingly result in non-uniform heating of the resin in die head 25 if a heater were provided in die head 25, which would seem disadvantageous especially relative to the seeming symmetrical and uniform heating able to be applied in the Hiroshi JP patent.

Therefore, in view of all of the above, it is asserted that it would not be obvious to use the heater for the cylindrical die tip of the Hiroshi JP patent in the block extruder head 25 of the Cornils patent, since there is no disclosed problem to be solved in the Cornils patent, there is no disclosed advantage for the Cornils patent, and there are a number of disadvantages to using a heater in die head 25 of the Cornils patent.

The Marttila patent (as applied against the subject matter of claim 3 now in claim 1) discloses the use of perforations in an edge of a plate to which an edge mould is to be attached. However, it is questionable whether such perforations would ever be used in the glass pane of the Cornils patent as such holes are generally avoided in a glass sheet due to the weaknesses introduced thereby. Therefore, it is asserted that it would not be obvious to add perforations to the glass sheet being fitted with an edge strip in the Cornils patent as alleged by the examiner.

The Honig publication discloses a cooling device 46 for a strip. Notably, the cooling device is directed at the edge of the strip, so that cooling would be preferentially

taking place at that edge. In claim 1, it is particularly recited that cooling takes place, so that the "outer strip surfaces" cool first, that is before the spot immediately adjacent the edge for the noted advantage of the shrinkage/compression fit as noted above and the exact opposite of what is taught in the Honig publication.

Therefore, for all of the foregoing reasons, it is submitted that amended independent claim 1 is not made obvious by a combination of the Cornils patent, the Hiroshi JP patent and the Marttila patent. For these same reasons, it is submitted that claims 2 and 4-8 dependent therefrom are likewise allowable.

In new claim 8, it is particularly claimed that the heat is applied directly to the edge of the conductive sheet. The Cornils patent does not disclose such a heat application; and in view of the fact that the sheet is made of glass, such a heat application would probably be inappropriate for a glass sheet as such a localized heating would tend to break the glass. Therefore, for this additional reason, it is submitted that new dependent claim 8 is neither disclosed nor made obvious by the cited references.

For all of the foregoing reasons, it is submitted that the present application is in condition for allowance and such action is solicited.

Respectfully submitted,

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